

WHAT IS CLAIMED IS:

1. A polymer composition comprising a liquid crystalline polymer and metal particles having a particle size, wherein the particle size of at least 90 weight % of the metal particles is greater than about 200 μm .
2. The polymer composition according to claim 1, wherein the particle size of at least 90 weight % of the metal particles is greater than about 400 μm .
3. A polymer composition comprising a liquid crystalline polymer and metal particles having an average particle size, wherein an average particle size of the metal particles is greater than about 420 μm .
4. The polymer composition according to claim 3, wherein the average particle size is greater than about 500 μm .
5. The polymer composition according to any of claims 1 to 4, wherein the polymer composition comprises from about 20 weight % to about 70 weight % of the metal particles based on the total weight of the polymer composition.
6. The polymer composition according to any of claims 1 to 5, wherein the metal particle is selected from the group consisting of aluminum, brass, copper, magnesium, nickel, stainless steel, steel, silver, tin, and zinc particles.
7. The polymer composition according to claim 6, wherein the metal particle is an aluminum particle.
8. The polymer composition according to claim 7, wherein the aluminum particle is an aluminum flake.

9. The polymer composition according to claim 8, wherein an average length of the aluminum flake is from about 0.25 mm to about 10 mm, an average width of the aluminum flake is from about 0.25 mm to about 10 mm, and an average thickness of the aluminum flake is from about 5 μm to about 250 μm .

10. The polymer composition according to claim 9, wherein the average length of the aluminum flake is from about 0.5 mm to about 5 mm, the average width of the aluminum flake is from about 0.5 mm to about 5 mm, and the average thickness of the aluminum flake is from about 10 μm to about 100 μm .

11. The polymer composition according to claim 10, wherein the average length of the aluminum flake is about 0.6 mm, the average width of the aluminum flake is about 0.6 mm, and the average thickness of the aluminum flake is about 25 μm .

12. The polymer composition according to claim 10, wherein the average length of the aluminum flake is about 2.0 mm, the average width of the aluminum flake is about 0.5 mm, and the average thickness of the aluminum flake is about 25 μm .

13. The polymer composition according to claim 10, wherein the average length of the aluminum flake is about 1.0 mm, the average width of the aluminum flake is about 1.0 mm, and the average thickness of the aluminum flake is about 25 μm .

14. The polymer composition according to any of claims 1 to 13, wherein the composition further comprises at least one of a colorant, reinforcing filler, mineral filler, antioxidant, thermal stabilizer, ultraviolet light stabilizer, plasticizer, lubricant, and mold release agent.

15. The polymer composition according to claim 14, wherein the filler is a non-thermally conductive filler.

16. The polymer composition according to claim 15, wherein the non-thermally conductive filler is selected from the group consisting of glass fibers, talc, synthetic polymeric fibers, metal oxide fibers, silicate fibers, rock wool fibers, and silicon carbide fibers.

17. The polymer composition according to any of claims 1 to 16, wherein the polymer composition consists essentially of the liquid crystalline polymer, one type of metal particle, and optionally, non-thermally conductive fillers.

18. The polymer composition according to any of claims 1 to 17, wherein the liquid crystalline polymer is a polyester that is at least partially aromatic.

19. The polymer composition according to claim 18, wherein the polyester is formed from the reaction product of at least one dicarboxylic acid selected from the group consisting of terephthalic acid, isophthalic acid, 2,6-naphthalic dicarboxylic acid, 3,6-naphthalic dicarboxylic acid, 1,5-naphthalic dicarboxylic acid, and 2,5-naphthalic dicarboxylic acid; and at least one diol selected from the group consisting of hydroquinone, resorcinol, 4,4'-biphenol, 3,3'-biphenol, 2,4'-biphenol, 2,3'-biphenol, and 3,4'-biphenol.

20. The polymer composition according to claim 19, wherein the polyester is further formed from at least one hydroxycarboxylic acid selected from the group consisting of p-hydroxybenzoic acid, m-hydroxybenzoic acid, 2,6-hydroxynaphthalic acid, 3,6-hydroxynaphthalic acid, 1,6-hydroxynaphthalic acid, and 2,5-hydroxynaphthalic acid.

21. A melt fabricated article made from the polymer composition according to any of claims 1 to 20.

22. An extruded article made from the polymer composition according to any of claims 1 to 20.

23. An injection molded article made from the polymer composition according to any of claims 1 to 20.

24. Cookware made from the polymer compositions according to any of claims 1 to 20.

25. The cookware according to claim 24, wherein the cookware is selected from the group consisting of pans, sheets, trays, dishes, and casseroles.

26. A method of increasing the thermal conductivity of an article formed from a polymer composition comprising compounding metal particles having a particle size, wherein the particle size of at least 90 weight % of the metal particles is greater than about 200 μm with a liquid crystalline polymer and forming said article from said polymer composition.

27. A method of increasing the thermal conductivity of an article formed from a polymer composition comprising compounding metal particles having an average particle size, wherein the average particle size of the metal particles is greater than about 420 μm .

28. A use of metal particles, wherein at least 90 weight % of the metal particles have a particle size greater than about 200 μm , as an additive of a liquid crystalline polymer composition to increase the conductivity of the polymer composition.

29. A use of metal particles having an average particle size, wherein the average particle size of the metal particles is greater than about 420 μm , as an additive of a liquid crystalline polymer composition to increase the conductivity of the polymer composition.